

Claims

What Is Claimed Is:

1. A method for treating or preventing cancer comprising administering to a patient in need of such treatment or prevention a therapeutically effective amount of a X-nitro compound or a pharmaceutically acceptable salt, hydrate, N-oxide or solvate thereof.
2. The method of Claim 1, further comprising irradiating the patient.
3. A pharmaceutical composition comprising a X-nitro compound or a pharmaceutically acceptable salt, hydrate, N-oxide or solvate thereof and a pharmaceutically acceptable diluent, excipient or adjuvant.
4. A method for treating or preventing cancer comprising administering to a patient in need of such treatment or prevention a therapeutically effective amount of the pharmaceutical composition of Claim 3.
5. The method of Claim 4, further comprising irradiating the portion of the patient which contains the cancer.
6. The method of any one of Claims 1, 2, 4 or 5 further comprising administering to the patient a therapeutically effective amount of another anti-cancer agent or a pharmaceutically acceptable salt, hydrate, N-oxide or solvate thereof or a pharmaceutical composition comprising the other anti-cancer agent or a pharmaceutically acceptable salt, hydrate, N-oxide or solvate thereof and a pharmaceutically acceptable diluent, excipient or adjuvant.
7. The method of any one of Claims 1, 2, 4 or 5, wherein the cancer is breast cancer, renal cancer, brain cancer, colon cancer, colorectal cancer, prostate cancer or lung cancer.
8. The method of any one of Claims 1, 2, 4 or 5, wherein the X-nitro compound is a nitrocarbon.

9. The method of any one of Claims 1, 2, 4 or 5, wherein the X-nitro compound is a nitroamine.

5 10. The method of any one of Claims 1, 2, 4 or 5, wherein the X-nitro compound is 2,4,6,8,10,12-hexanitro-2,4,6,8,10,12-hexaazatetracyclo[5.5.0.0^{5,9}.0^{3,11}]dodecane, 1,3,5-trinitro-1,3,5-triazacyclohexane, 1,3,5,7-tetranitro-1,3,5,7 tetraazacyclooctane, 4,10-dinitro-2,6,8,12-tetraoxa-4,10-diazatetracyclo[5.5.0.0^{5,9}.0^{3,11}]dodecane, 3-nitro-1,2,4-triazol-5-one, nitroguanidine, 1,3,3 trinitroazetidine, ammonium dinitride, 1,1-diamino-2,2-dinitroethane, tetranitrocarbazole or tetranitrodibenzo-1,3a,4,6a tetraazapentalene.

11. The method of any one of Claims 1, 2, 4 or 5, wherein the X-nitro compound is 2, 4, 6, 8, 10, 12-hexanitro-2, 4, 6, 8, 10, 12-hexaazatetracyclo[5.5.0.0^{5,9}.0^{3,11}]dodecane, 1,3,5-trinitro-1,3,5-triazacyclohexane or 1,3,5,7-tetranitro-1,3,5,7 tetraazacyclooctane.

12. The method of Claim 2, wherein a portion of the patient is irradiated.

20 13. The method of Claim 12, wherein the irradiated portion is the portion which is cancerous.

14. The method of Claim 2, wherein the patient is irradiated with photons, electrons, or gamma rays.

25 15. A method for treating tumor cells with a reduced intracellular environment comprising administering to a patient in need of such treatment or prevention a therapeutically effective amount of the pharmaceutical composition of Claim 3.

30 16. A method for treating tumor cells with a reduced intracellular environment comprising administering to a patient in need of such treatment or prevention a therapeutically effective amount of a X-nitro compound or a pharmaceutically acceptable salt, hydrate, N-oxide or solvate thereof.

17. A method for treating or preventing solid tumors comprising administering to a patient in need of such treatment or prevention a therapeutically effective amount of the pharmaceutical composition of Claim 3.

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18. A method for treating or preventing solid tumors comprising administering to a patient in need of such treatment or prevention a therapeutically effective amount of a X-nitro compound or a pharmaceutically acceptable salt, hydrate, N-oxide or solvate thereof.

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19. The method of any one of Claims 15-18 further comprising irradiating the patient.

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20. A method for treating or preventing inflammation comprising administering to a patient in need of such treatment or prevention a therapeutically effective amount of a X-nitro compound or a pharmaceutically acceptable salt, hydrate, N-oxide or solvate thereof.

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21. The method of Claim 20, further comprising irradiating the patient.

22. A method for treating or preventing inflammation comprising administering to a patient in need of such treatment or prevention a therapeutically effective amount of the pharmaceutical composition of Claim 3.

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23. The method of Claim 22, further comprising irradiating the patient.

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24. A method for treating or preventing autoimmune disease comprising administering to a patient in need of such treatment or prevention a therapeutically effective amount of a X-nitro compound or a pharmaceutically acceptable salt, hydrate, N-oxide or solvate thereof.

25. The method of Claim 24, further comprising irradiating the patient.

26. A method for treating or preventing inflammation comprising administering to a patient in need of such treatment or prevention a therapeutically effective amount of the pharmaceutical composition of Claim 3.

5 27. The method of Claim 26, further comprising irradiating the patient.

28. A method for treating or preventing cardiovascular disease comprising administering to a patient in need of such treatment or prevention a therapeutically effective amount of a X-nitro compound or a pharmaceutically acceptable salt, 10 hydrate, N-oxides or solvate thereof.

29. The method of Claim 28, further comprising irradiating the patient.

30. A method for treating or preventing cardiovascular disease comprising 15 administering to a patient in need of such treatment or prevention a therapeutically effective amount of the pharmaceutical composition of Claim 3.

31. The method of Claim 30, further comprising irradiating the patient.

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